

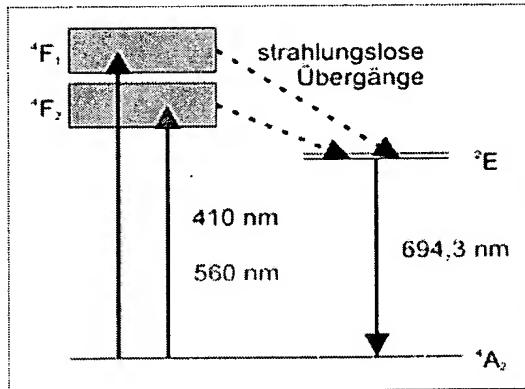
REMARKS/ARGUMENTS

Previously pending Claims 1-22 have been canceled and replaced by the new claim set comprising Claims 23-35.

Independent Claim 23 calls for a frequency shifted feedback laser resonator wherein narrow banded non-pumping seed laser light is injected into the resonator and the injected light is modulated for adjusting the laser light and chirp rate to one another so that for a given distance the intensity of beat signal is increased. The claimed structure is not believed to be disclosed by any of the primary references.

The claims emphasize the fact that the light which is inserted into the FSF resonator in order to increase the beat intensity at the detector is not pumping the gain medium within the FSF resonator. The claims also specify that the modulation is effected in a particular way relating to the chirp rate and the distance to be measured.

The difference between seeding and pumping can be most clearly seen if one looks at the classical three level laser, for example, a helium-neon laser having a ground state A, an excited state F and an intermediate state E into which the excited state F depopulates, as shown in the following diagram:



The inversion is obtained between states E and A. In order to pump the medium, energy must be provided to bring atoms from the ground state A into the excited state F. In contrast, as seed laser light, one has to seed at a wavelength corresponding to the transition E-A. The same holds true for other lasers as well. Therefore, pumping and seeding is something quite different.

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The prior art does not disclose the claimed FSF laser seeding and seeding that relates to the chirp rate and a distance to be measured.

Nakamura suggests to pump the FSF laser but not to inject any seed light. Shattil uses a different arrangement as shown in Fig. 1, for example. An injection source 110 emits a seed signal which is coupled into the FSFC 100 by means of AOM 107. Inserting a narrow band emission of light into the cavity of Shattil is not the same as modulating seed light into a laser cavity as defined by the claims in the present application.

It is submitted that the new set of claims patentably defines over the prior art of record.

In the event Applicants have overlooked the need for an extension of time, payment of fee, or additional payment of fee, Applicants hereby petition therefor and authorize that any charges be made to Deposit Account No. 02-0385, Baker & Daniels.

Respectfully submitted,

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CERTIFICATION OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on: November 26, 2008

JOHN F. HOFFMAN, REG. NO. 26,280

Name of Registered Representative

Signature

November 26, 2008

Date